

REMARKS

Procedural History

Respectfully, in response to the preamble paragraph of the replacement office action, Applicant hereby submits this procedural history to correct and clarify the status of the application. Applicants submitted parent application 10/604,703 on August 11, 2003 to the USPTO. The instant application 10/708,739 is a continuation in part application of the parent application and was filed on March 22, 2004.

On July 15, 2004 a restriction in the 10/604,703 parent application was issued. Subsequent to this a restriction was issued on August 6, 2004 in the instant application. An election of species in response to the restriction requirement in the instant application was delivered by hand and filed on July 21, 2004 in the instant application, and subsequently entered into the case. An election was also delivered by hand and filed in the 10/604,703 parent case on **August 12, 2004**.

An office action was instituted in the instant application on August 6, 2004. Applicants and their representatives requested and the Examiner granted a personal interview on September 8, 2004. Subsequent to this, Applicants' prepared and filed an amendment on October 14, 2004 together with a Supplemental Information Disclosure Statement and PTO-1449 listing 52 patent references and 6 non-patent references. In a telephone conversation with the Examiner on January 6, 2005, the Examiner indicated that the election filed on August 12, 2004 in the parent case 10/604,703 was not properly scanned into the Electronic File Wrapper at the USPTO. Applicants' promptly responded by sending a facsimile of the original filing and a copy of the date stamped filing receipt indicating the original filing date of **August 12, 2004**.

After receiving the facsimile copy, the Examiner instituted a replacement, non-final office action on January 21, 2005 in the instant application. The replacement office action fails to consider the amendment filed on October 14, 2004. As it does not make mention of this filing, it is Applicants' position that the amendment has not been made of record in the case. As such, the following response and amendment is submitted as a replacement amendment, the amendment indicating changes from the originally filed claims and specification. It is respectfully requested that the amendment be considered and made of record in replacement of the amendment filed on October 14, 2004. Applicants' have proceeded in their response on this basis.

Claim 2 has been cancelled and claims 30-62 have also been canceled in compliance with the restriction requirements, claims 1, 3-6, 10-12, 15-20, and 26-27 are amended, and claims 63-65 added to the application. Further, the title, specification, and Figures 3B, 4B, 5B, 8A-8C and 10A have been amended. In addition, a terminal disclaimer is submitted herewith to overcome the non-statutory double patenting rejection presented in the office action. The Applicant has carefully and thoughtfully considered the Office Action and the comments therein. For the reasons given below, it is submitted that this application is in condition for allowance.

Interview

The Applicants kindly thank the Examiner for the personal interview on September 8, 2004. The substance of the interview is recorded in the Examiner Interview Summary Record provided to Applicants and their Representative at the interview. As indicated by the Examiner at the bottom of the Examiner Interview Summary Record, the Applicant is not required to provide a separate record of the substance of the interview. See M.P.E.P. § 713.04.

Objection to the Drawings

In the Action on page 4, section 5, the drawings are objected to under 37 C.F.R. § 1.83(a) as failing to show the conventional names, as described in the specification, for the elements shown in the drawings with non-conventional symbols. Applicants have amended Figures 3B, 4B, 5B and 8A-8C to show labels for the cited components. As such, it is respectfully requested that the objection to the drawings be rescinded.

In the Action on page 3 in section 4, the drawings were objected to under 37 C.F.R. § 1.83(a) as not showing every feature of the invention specified in claims. Specifically the objection noted that “the klaxon, the horn, the light, the plurality of lights, the LCD panel, the simulated human voice, the human voice, the light emitting diode, the plurality of light emitting diodes” of claim 8 and “the one-way charging diode...comprises an at least one SCR” claimed in claims 15 and 16 and “the signal processor, the lookup tables, the memory device, the security protocol/encryption element, the VI sensor, etc.” claimed in claim 20, must be shown in the drawings or cancelled from the claims and element 750 properly labeled.

The features claimed in claims 8, 15, 16, and 20, are shown in the amended drawings 8B and 10A. In particular, as per claim 20 and the LCD Panel of claim 8, the features of these claims are shown in amended Figure 8B, items 700 and 775 as amended. Additionally, switch sensor 750 has been labeled. Further, as per the remaining elements of claim 8, the features of this claim are shown in amended Figure 10A, item 775 as amended. It is also noted that elements 710 and 740 are shown and described as “sensors can for instance be, but are not limited to, VI sensors” (Applicants’ specification, paragraph 139). With respect to claims 15 and 16 citing the SCR, the claim has been amended to correct the error in the claim and the element

is now correctly claimed as the “one-way charging circuit comprising an...SCR.” Hence, because the features of claims 8, 15, 16 and 20 are shown in the drawings and the remaining objections have been addressed and overcome, Applicant respectfully requests that the objections to the drawings be rescinded.

Objections to the Specification

In the Action on page 5 in section 7, the Action objected to the title as not being descriptive. Applicants have amended the title accordingly. Hence, Applicants request that the objection to the title be rescinded.

In the Action on page 5 in section 8, the Examiner noted errors in the specification and requested that the Applicant correct any remaining errors in the specification. The Applicant thanks the Examiner for the review of the specification. The Applicant has amended the specification to correct the errors noted by the Examiner and has reviewed the specification for any remaining errors and amended accordingly. Applicants do note, however, that cited paragraph 133, stating in part “The embodiment utilizes a configuration similar to that of Figure 8B, save for the use of the SCR 4000” indicates Figure 8B in the as filed electronic copy.

In the Action on page 6 in section 9, the Examiner objected to the specification “as failing to provide proper antecedent basis for the claimed subject matter”. As it was unclear as to what the statutory grounds for the objections were, Applicants’ representative contacted the Examiner. In a telephone conference on October 12, 2004, the Examiner indicated that the objection to the claims language is based on 35 U.S.C. § 112, second paragraph as she felt the limitations were indefinite. Applicants therefore respond on the basis that the objections are

directed to 35 U.S.C. § 112, second paragraph. It is respectfully submitted that the cited limitations of the claims, as amended, are not indefinite.

As per the claims containing the limitation “the one-way charging diode...further comprising an at least one SCR”, these claims are objected to because the Examiner was unclear as to the recitation of a charging diode that comprises an at least one SCR. However, as mentioned above, these claims have been changed to indicate that the charging circuit comprises and at least one SCR. As per the limitation “coupled to a...point...beyond” the one-way charging circuit, Applicants note that the claim reciting the limitation, claim 47, has been cancelled in accord with the restriction requirement of paper 20040712. Therefore the objection is rendered moot. As per the limitation “short periods”, Applicants have amended the claim to remove the term “short”. The claim as amended is definite. Thus, Applicants respectfully request that the objections to the specification be rescinded and that the claims be allowed.

In the Action, on page 6, in section 10, claims 14 and 15 are objected to as being substantial duplicates of one another. Applicants traverse this objection. Claim 14 specifies that the one-way charging circuit further comprises at least one silicon rectifier. Claim 15 specifies that the silicon rectifier is an at least one Silicon Controlled Rectifier (SCR). As stated in Applicants specification, at paragraph 133, the SCR differs from the silicon rectifier in that the SCR is provided with a control input that extends to a controller (see Applicants’ Figure 8C, coupling elements 4000 and 700). This controller allows for the selective disengagement of the SCR. (see Applicants’ Specification, paragraph 133, lines 8-11). This allows the branch of the circuit that includes the one-way charging circuit to be shut down and effectively prevents overcharging of the standby battery. As such, there is a significant difference between the claims indicating a silicon rectifier and a silicone controlled rectifier and Applicants have properly

indicated as much in an attempt to differentiate the embodiments disclosed. Therefore, Applicants respectfully submit that the claims are distinct and request that the objection be rescinded.

In the Action on page 6 in Section 11, claims 2, 3, 20 and 27 are objected to because of informalities. Applicants have either canceled or amended claim 2, 3, 20 and 27 to remove the informalities and Applicants have reviewed the claims for any remaining informalities and taken appropriate actions to correct these informalities. It is therefore requested that this objection be rescinded.

35 U.S.C. §102 Rejection

In the Action on page 7 in section 13, claims 1, 3-8, 10-12, 17, 20, and 27 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,545,445 to McDermott (hereinafter McDermott). Applicants respectfully traverse this rejection. Applicants note that claim 1 stands amended, however, the amendments incorporate elements of claim 2, which was rejected on the same grounds in the Action. Additionally, the arguments provided for amended claim 1 apply to newly added claim 65.

In addressing claim 1, the Office Action asserts that McDermott teaches a multiple battery system 100 with a main battery 102, an at least one auxiliary battery 103, a main electrical circuit 105 with a coupling of a common positive terminal with an at least one switching device 122, the at least one switching device having at least two operating positions wherein the a first operating position provides electrical charge to both the main battery 102 and the at least one auxiliary battery 104 and a controller 108 is coupled to the main electrical circuit

and switches the switching device based on input from sensors 116 and 118. In addressing the limitations of claim 2, no further citations or grounds for rejection are provided.

As to amended claim 1, McDermott does not teach several limitations of amended claim 1. The action fails to address the positively recited limitation that the at least one switching device is used “to selectively couple the main or the at least one standby battery” to the electrical system. The action also fails to address the positively recited limitation of a “one-way charging circuit” in amended claim 1, formerly positively recited in claim 2. Moreover, McDermott does not provide for several additional aspects of the positively claimed operating positions nor does it provide for the positively recited recharging aspects of the invention as claimed in amended claim 1.

In an effort to more expediently point out the specific distinctions believed to render the application patentable over the references cited, Applicants’ provide the following non-limiting summary in table format. In no way should the table be considered a complete listing of distinctions. The points of distinction in the table are further exemplified and expounded upon in the remarks following the table.

<u>McDermott Reference (as to claim 1)</u>	<u>Instant Invention</u>
<p>“auxiliary battery is always online in the circuit” and allows for the addition of a starter battery on startup, i.e. the auxiliary battery or starter and the auxiliary battery are connected in McDermott. (See McDermott, Figs. 1 & 2, abstract, line 16; col. 4, lines 45-50 and elements 106, 104, 102; col. 3 lines 12-13)</p>	<p>“selectively switches between the main or the at least one standby battery for operating the electrical system”. The main or the standby operates the electrical system. (Applicant’s claim 1)</p>
<p>Does not provide a one-way charging circuit charging a standby battery, instead uses a parallel circuit engaging both batteries (See McDermott, Fig. 1, col. 5, lines 7-13, elements)</p>	<p>A one-way charging circuit provides for “electric recharging to the at least one standby battery” (Applicants’ claim 1)</p>

<p>Teaches away from the provision of one-way charging circuit by providing that the auxiliary battery and starter battery are connected to electrical system in parallel (See McDermott, Fig. 1 and 2, col.4, line 5; col. 5, lines 40-41; and element 106 & 206 “parallel circuit”)</p>	<p>“in a first operating position of the at least two operating positions ...the main battery operates the electrical system and the one-way charging circuit is coupled to the common positive terminal and the positive output of the standby battery providing electrical recharging to the at least one standby battery” (Applicants’ claim 1, Figures 3-9, Applicants’ Specification, para. 120); the batteries are not in parallel and no parallel circuit is engaged with the at least one standby battery, as there is no discharge since the one-way nature of the charging circuit prevents discharge. (Applicants’ Specification, para. 115)</p> <p>Additionally, in a second operating position of the at least two operating positions, “the common positive terminal is coupled directly to the standby positive output”; the main battery is isolated from both the standby battery and the electrical system and, again, no parallel circuit is engaged. (Applicants’ claim 3; Figures 3-9 and Specification, para. 119)</p>
<p>Does not provide for charging an at least one standby battery without discharging same (See McDermott, Figures 1 and 2, parallel circuit 106)</p>	<p>Provides for one-way charging of an at least one standby battery i.e. without drawing from the at least one standby battery - allowing for maintenance of a fully charged standby battery (Applicants’ spec., para. 119-121)</p>
<p>Bleeds charge from one battery to the other in the parallel circuit (See McDermott, Figs. 1 & 2, col. 4, lines 45-50 and elements 106, 104, 102)</p>	<p>Does not permit bleed from main battery to any of the at least one standby batteries or vice versa, as the batteries are separated by the one-way charging circuit or isolated from one another</p>

As discussed in the interview, the instant invention differs from the McDermott reference in several ways, and the amended claims positively recite these differences.

Firstly, claim 1 specifically recites that the at least one switching device is used “to selectively couple the main or the at least one standby battery” to the electrical system. The switching device in McDermott is engaged to switch the starter battery into the circuit, it allows for selective engagement of either the auxiliary battery 106 or both the auxiliary battery 106 and the starter battery 104, not the starter or the auxiliary battery. It, therefore, does not provide for selectively engaging either the auxiliary battery 106 or the starter battery 104, as positively recited in the claims, as the starter battery is only engaged together with the auxiliary battery. Furthermore, McDermott explicitly teaches that the auxiliary battery is always connected (McDermott, abstract, line 16). This teaching further supports the assertion that the system of McDermott cannot selectively switch to either the auxiliary or the starter battery as the auxiliary battery is taught as always being connected.

In contrast, as positively recited in claim 1, the switching device of the instant invention is described as switching **between** a main **or** an at least one standby battery to operate the electrical system. Therefore, not only does McDermott fail to anticipate the invention, but with its explicit teachings of an always connected auxiliary battery, one of ordinary skill in the art would not even look to modify McDermott in a manner that would render obvious the claimed switching device and its selective engagement of either the main battery **or** one of the at least one standby battery to operate the electrical system. It would be contrary to the teachings of McDermott. It is, therefore, respectfully submitted that claim 1 is not anticipated by McDermott.

Secondly, amended claim 1 provides that the “at least one one-way charging circuit is coupled to the common positive terminal and the positive output of the standby battery providing recharging to at least one of the at least one standby battery.” The system of McDermott and

other switched battery systems do not provide nor do they suggest the positively recited features of a one-way charging circuit, but instead, teaches away from such an element.

The McDermott reference as a switched battery system is similar to the Hwa and Waugh patents and other patents cited in Applicants' specification that provide, in general, parallel switched battery systems, save that the McDermott parallel switching system allows for switching a starter battery 102 from or into the parallel circuit 106 with auxiliary battery 104 (McDermott Figs. 1 and 2, and McDermott specification col. 5, lines 1-10; col. 5, lines 30-35) as opposed to switching between the two batteries as shown in, for instance, U.S. Patent 6,121,750 to Hwa.

Similar to the switched battery system of Hwa, McDermott provides a secondary battery for intermittent engagement to fulfill requirements for short duration, high current output situations, i.e. starting (McDermott col. 2, lines 10-20). However, as stated in Applicants' specification in regards to Hwa, there is no indication or suggestion of a one-way charging circuit in the circuitry of these patents for charging the secondary battery and, thus, the secondary battery is not necessarily kept in a charged state, because the secondary battery is only providing additional cranking power. Systems such as these, which switch into parallel, bring both batteries into a position to operate the system and drain charge from one another (Applicants' specification, para. 13).

In contrast, in the instant invention the batteries are not in parallel and no parallel circuit is engaged with the at least one standby battery. Instead a one-way charging circuit is provided that couples to at least one of the at least one standby battery and provides recharging (Applicants' spec., paras. 119, 125). Webster's dictionary defines one-way as "moves in only one direction" and charging as "to give an electric charge." Therefore, the positive limitation of

a one-way charging circuit is, by its plain definition and as defined in the specification, a circuit providing a movement of an electrical charge in only one direction, i.e. a one-way valve (Applicants' spec., paras. 119). In the instant invention, this is shown in Figures 3B, 4B, 5B, 8A-9 as element 400. The one-way nature of the charging circuit has no equivalent in and cannot be provided in McDermott's parallel circuit (McDermott element 106).

A one-way charging circuit cannot be established to recharge the auxiliary battery or the starter battery in the parallel circuit 106 as the parallel circuit of McDermott requires that recharge occur with discharge in all the configurations shown, in all embodiments described. It is precisely the bi-directional nature of the parallel circuit 106 recited in McDermott, allowing flow into and out of the battery to operate the electrical system, that obviates the possibility of providing or even modifying McDermott to provide a one-way charging circuit to a second battery. In describing the operation of the embodiments of McDermott shown in Figures 1 and 2, McDermott states that when the system is recharging the batteries **must be in parallel and be coupled to the electrical system to be recharged (Figs. 1 and 2, col. 4, lines 47-51, col. 5, lines 35-37).** That is all the batteries are online in the parallel circuit to be recharged and therefore must be engaged and capable of being discharged in order to be recharged. This is distinct from positively claimed coupling of a standby battery via a one-way charging circuit to recharge the battery, which allows for only the one-way or unidirectional recharging of the standby battery.

In fact, the parallel circuit and its bi-directional flow are cited as advantages in McDermott, the parallel circuit allowing the two batteries to share charge with one another as determined by the controller (col. 4, lines 47-51, col. 5, lines 35-37). McDermott also permits the system to draw down energy from the charged batteries in deference to the discharged battery when the electrical system is not operating – effectively bleeding charge from one battery to

another. However, this is precisely the shortcoming of the all the previous switched battery systems, as stated in the application (Applicants' spec. paras. 9, 11, 119, 120). This circuit configuration does not protect the charge state of the secondary battery. This can lead to a situation where the discharged battery drains the secondary battery down to a point of insufficient charge for starting. In fact, the McDermott reference specifically teaches away from the positively recited limitations of a one-way charging circuit, stating that recharging can be provided BETWEEN the batteries (see McDermott specification col. 5, lines 1-10; 49-64) – which, as argued above, cannot be done if the batteries are separated by a one-way charging circuit as positively recited. This “bleeding” of electrical charge between the batteries is precisely what the instant invention is trying to prevent in its configuration as claimed and is a further teaching away from the claimed invention and evidence that one of ordinary skill in the art would not look to McDermott.

In contrast, amended claim 1 provides “in a first operating position of the at least two operating positions ...the main battery operates the electrical system and the one-way charging circuit is coupled to the common positive terminal and the positive output of the standby battery providing electrical recharging to the at least one standby battery.” Effectively this allows for isolation of the at least one standby battery from the possible drain of the spent or defective main battery and simultaneously provides for recharging or maintenance charging of the at least one standby battery so long as the generator in the electrical system is functioning properly, thus guaranteeing the necessary charge state to power up the electrical system if the main battery fails. This is accomplished by the provision of the one-way charging circuit, as shown. This configuration, as argued above, cannot be provided by the parallel switched battery system of McDermott.

Further, in the second switch position of the at least two switch positions, as positively recited in claim 3, the at least one standby battery is brought online without the main battery. As positively claimed and shown in the exemplary embodiments, the main battery is switched out of operation and the one-way charging circuit prevents electricity from flowing to it and effectively isolates the main battery. The fully engaged at least one standby battery operates the electrical system, as the current path from the second switch pole is beyond the one-way charging circuit and coupling in this fashion does not permit an electrical flow from the at least one standby battery to the main battery – as it is against the one-way direction of the circuit. If the electrical system is operating properly and recharging properly, the system can be switched back from the at least one standby battery to the main battery, allowing for recharge of both batteries without the possibility of bleeding to the discharged battery, but still allowing both to receive charge from the electrical system.

Additionally, with the positively claimed instant invention as compared with previous designs, in the event that the generator in the electrical system has failed or the main battery is shorted, the fully charged at least one standby battery, in part because it does not contend with the additional load of the dead main battery in a parallel circuit, can operate the electrical system and can do so for an extended period of time allowing needed maintenance to be sought in the case of a generator failure or replacement of the battery in the case of a main battery defect (Applicants' Specification, paras. 64, 121, 136). Again, the McDermott reference specifically teaches away from this type of operation and does not provide this added measure of safety. Though McDermott does permit the isolation of starter battery, it cannot provide simultaneous operation from one battery and recharging of another **without drawing** from both batteries.

This difference is further exemplified in added claim 64, which provides for recharging WITHOUT allowing for the engagement of the at least one standby battery or the possibility of depletion through recharging of the main battery from the at least one standby battery. In contrast, the system of McDermott simply provides a switched parallel battery system that allows for selective engagement of either the auxiliary battery or both batteries and specifically allows for the recharging between the batteries, i.e. bleeding charge from one battery to the other.

In summary, the provision of these elements and operational modes is unique, and in stark contrast to the McDermott reference and references like McDermott, in that in the instant invention the resulting at least one standby battery is fully functional and is not bled down or depleted by the discharged main battery. The at least one standby battery is never allowed to “see” the discharged main battery. The instant invention provides for engagement of either battery to operate the electrical system, in this instance the main or the at least one standby battery are sufficient to run the electrical system while allowing for selective recharging during operation of the system. The system is not put into a parallel circuit with both batteries used to operate the electrical system, as is done with McDermott. The invention accomplishes this specifically because it DOES NOT provide for the ability to bleed charge from one battery to the other, something McDermott specifically teaches. The invention allows for simultaneous recharge or maintenance charging of the at least one standby battery without discharge or diminishment by the main battery or the electrical system through the use of a one-way charging circuit, as claimed. Thus, McDermott cannot anticipate or render obvious the instant invention as it does not provide for the several limitations discussed above, which are positively recited in the claims. It is therefore respectfully requested that the that the rejections of claims 1 and 3 be rescinded, and that these claims, together with added claims 63-65, be allowed. Furthermore, as

claims 4-8, 10-12, 17, 20, and 27 are dependent from allowable claim 1, as discussed herein, claims 4-8, 10-12, 17, 20, and 27 are allowable as being dependent from an allowable claim and such allowance is respectfully requested.

In the Action on page 9 in section 16, claims 12, 18 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McDermott. Applicants respectfully traverse this rejection. As claims 12, 18 and 29 are dependent from allowable claim 1, as discussed herein, claims 12, 18 and 29 are allowable as being dependent from an allowable claim. Therefore, Applicants respectfully request that the rejections of claims 12, 18, and 29 be rescinded, and that these claims be allowed.

In the Action on page 10 in section 17, claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over McDermott in view of Tremblay. Applicants respectfully traverse this rejection. As claim 9 is dependent from allowable claim 1, as discussed herein, claim 9 is allowable as being dependent from an allowable claim. Therefore, Applicants respectfully request that the rejections of claim 9 be rescinded, and that this claim be allowed.

In the Action on page 11 in section 18, claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over McDermott in view of U.S. Patent 5487956 to Bromley et al. (hereinafter Bromley). Applicants respectfully traverse this rejection.

The Action asserts that McDermott teaches the limitations of claim 13, as discussed in relation to claim 1, save for a one-way charging diode as positively recited. The Action further asserts that Bromley discloses a multiple battery system where the auxiliary/backup battery 105 charging current is provided through a steering and polarity protection diode 119.

Firstly, Applicants respectfully submit that claim 13 is allowable over the combination of references as argued above, as this claim is dependent from allowable claim 1 and Bromley fails to overcome the cited deficiencies of McDermott.

Further, with respect to the teachings of McDermott and Bromley these references are from non- analogous art. McDermott teaches a dual battery system having a vehicle auxiliary battery and a vehicle starter battery, both significant, full sized batteries used in operating a vehicle. In contrast, Bromley teaches a microelectronics backup battery system to maintain the operation of a single auxiliary, a security system, should the main car battery fail. As discussed in Bromley at column 1, lines 12-21 and column 3, lines 36-48, the battery backup is used exclusively to continue operating the vehicle security system. It does not isolate a fully functional, standby battery for operation of the vehicle or an electrical system.

In comparing the vehicle multiple battery system of McDermott and the microelectronics battery backup system of Bromley, the vehicle multiple battery art is quite different from the microelectronics battery backup art, and one of ordinary skill would *not* look to the microelectronics battery art for a device to replace a switched battery system for full sized batteries such as that shown in the vehicle battery system of McDermott. One of ordinary skill in the art would not look to Bromley to provide the positively recited one-way charging circuit because the amount of energy involved in the batteries and in the recharging are significantly different, as discussed in Applicants' specification at paragraph 9 and 50. In the case of Bromley, the system is configured for a recharging a backup battery that is not drawn upon to operate the vehicle, but it is isolated until it is switched into parallel with the main battery (see Bromley Figure 1). Hence, one of ordinary skill in the art would not consider replacing the switches of McDermott in a multiple battery system with the steering and polarity diode that is a

part of a backup battery system for a microelectronics security system, such as that shown in Bromley. Thus, the teachings of McDermott and Bromley are from non- analogous art.

Moreover, the Action provides that one of ordinary skill in the art would be prompted to include the steering and polarity diode of Bromley to provide steering and overcurrent protection in modifying McDermott. Firstly, the diode disclosed in Bromley would be insufficient to handle the current passed to a standby battery having the equivalent charge capacity as the main battery, as the backup battery of Bromley is not a full size vehicle battery, but is intended to only operate the microelectronics of a security system.

Secondly, the teachings of McDermott do not hint at any issue with overcurrent protection nor would one be concerned with overcurrent protection because circuit described in McDermott, having a separate starter and auxiliary batteries controlled by a controller, would not necessitate overcurrent protection for any recharging as it is occurring simultaneously with the drawing of energy from the battery. That is the starter battery is switched in and out of the system and would not require a limitation on the power flowing to it, i.e. overcurrent protection, as the electronic controller would simply switch it off or out of the circuit and there is no steering needed or suggested by the parallel circuit of McDermott. There is no simultaneous recharging without draining going on in McDermott, the type of recharging that would necessitate steering and overcharge protection.

This type of recharging and the use of one-way charging diodes are typically found in references like those of U.S. Patent No. 5,002,840 to Klebenow, et al. and U.S. Patent No. 5,162,164 to Dougherty et. al. (see Applicants specification, paragraph 9), which use one-way charging diodes to protect and provide charge to a backup battery while operating from a main battery. However, in ALL these designs, including the non-analogous system of Bromley, the

backup battery is engaged in a parallel circuit, which obviates the one-way charging diode and puts **both** batteries in parallel, leading to the problems with previous systems as discussed above in relation to claim 1.

Moreover, providing this combination is in direct contradiction to the teachings of McDermott, as asserted above in the arguments distinguishing claim 1. McDermott specifically teaches that the batteries in its system are able to bleed charge from one another (see McDermott, col. 5, lines 49-64), whereas the system of Bromely is **specifically directed to preventing the bleed of the backup battery** by the main battery so as to maintain the operation of the security system. (Bromley, col. 1, lines 13-21).

In view of these diametrically opposite teachings, one could of ordinary skill in the art could not be motivated to use the asserted elements of Bromley in a manner that contravenes the teachings of McDermott. Instead, in contravention of the law, the motivation for applying the one-way charging diode in a circuit for simultaneously charging a backup battery that is separately engaged is from Applicants' disclosure, and not from the prior art. "Both the suggestion [to combine] and **the reasonable expectation of success** must be found in the prior art, not in the Applicant's disclosure." In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing In re Dow Chemical Co., 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) (citations omitted, emphasis added)).

Here, the motivation to combine the references came impermissibly from the Applicants' disclosure, and not from the prior art. The prior art of McDermott and Bromely provide no motivation for incorporating the one-way steering diode in the fashion suggested in the Action, and further provides no reasonable expectation that the incorporation of such a steering diode

would be successful, especially in view of the teaching away from such a device in the McDermott reference. Hence, the motivation for combining these two references is improper.

Thus, for these separate reasons, the Action fails to establish a prima facie case of obviousness, and claim 13 is nonobvious and allowable over the combination of McDermott in view of Bromely. Therefore, because claim 13 is nonobvious and allowable over the combination of references, Applicants respectfully request that the rejection of claim 13 be rescinded, and that this claim be allowed.

In the Action on page 12 in section 19, claims 14, 16 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McDermott in view of Bromley further in view of Dougherty, et al. Applicants respectfully traverse this rejection.

Firstly, Applicants respectfully submit that claims 14, 15, 16, and 19 are allowable over the combination of references as argued above, as this claim is dependent from claims 1 and claim 13 and Dougherty fails to overcome the cited deficiencies of McDermott and Bromely. The Action assumes that the unidirectional current path through the one-way charging diode needs an overcurrent protection device, such as an SCR/thyristor, to selectively limit current through the diode. Applicants note that no such limitation has been positively claimed. The Action further asserts that McDermott in view of Bromley teaches the limitations of claims 13 and claim 1, save that McDermott in view of Bromley does not teach a one-way charging circuit having an SCR/thyristor.

Initially Applicants do note that claim 14, 15, 16 and 19, as amended, do specify that the one-way charging circuit is an at least one silicon rectifier and further an at least one silicon controlled rectifier.

As to claims 14, 16, and 19, the Thysistor taught in Dougherty does not prevent discharge of the secondary battery through the main battery if the secondary battery is engaged, i.e. the main is dumped into parallel with the secondary battery. As mentioned in Applicants' specification, Dougherty and devices like Dougherty do not provide the positively recited claims limitations. Dougherty does not prevent depletion of the secondary battery from the main battery when the secondary battery is engaged, as the system puts the batteries together in parallel (see Applicants' specification, para 9). Additionally, as asserted above with respect to Bromely, the teachings of McDermott specifically teach against adding this limitation to the ability to bleed charge from one battery to the other as in the system of McDermott. The only suggestion to combine the positively recited elements of these claims comes from Applicants own specification and the motivation asserted, namely to provide overcurrent protection in a one-way circuit/SCR, is impermissibly taken from Applicants own disclosure.

Moreover, the inherent weaknesses of the systems like Dougherty due to the possibility of failing in a start up scenario can be directly shown by their failure to be adopted in the battery industry. The Dougherty systems and patents like them have been available to the industry for over 10 years. These patents and the related devices have been available to, and in fact are property of, some of the largest battery and electronics control system manufacturers in the world. Yet they have not been commercially successful because they cannot guarantee that they will function in emergency situations. In fact, these systems, in most instances, specifically teach away from the combination of components claimed. For the most part the previous systems have attempted to provide a quasi-jumpstart system, wherein a boost of charge is provided by the standby, or an additional battery, both of which switch into a parallel circuit and become electrically coupled and, therefore, potentially incapable of providing sufficient charge

in an emergency as they need to contend with a discharged battery and are drained by the same battery.

Not one of these systems suggests the innovative developments of the instant invention. The instant invention, as positively recited in the claims, overcomes these deficiencies by providing one or more standby batteries of sufficient capacity to operate the vehicle instead of the main battery and a switching device to selectively operate from one or another of the batteries. That is the system is designed to function as a true standby system, keeping a fully charged standby battery available for any eventuality. There is no way to bleed down the standby battery with the main battery, as no parallel circuit is created. Furthermore, the one-way circuit is provided to recharge the at least one standby battery and separates the at least one standby battery in the second operating position from being put into parallel with the main battery.

Thus, for these separate and additional reasons, the Action fails to establish a prima facie case of obviousness, and claims 14, 15, 16, and 19 are nonobvious and allowable over the combination of McDermott and Bromely further in view of Dougherty, et al. Therefore, because claims 14, 15, 16, and 19 are nonobvious and allowable over the combination of references, Applicants respectfully request that the rejection of claims 14, 15, 16 and 19 be rescinded, and that these claim be allowed.

In the Action on page 13 in section 20, claims 21-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McDermott in view of U.S. Patent 5694335 to Hollenburg (hereinafter Hollenburg). Applicants respectfully traverse this rejection.

The action asserts that McDermott teaches a multiple battery system, as discussed above in relation to claims 1-3, and that “to modify McDermott’s apparatus and include a wireless

network-controlled controller system, as disclosed by Hollenberg, in order to be able to **remotely disconnect the power supply** from certain controlled vehicle system circuits.”

Firstly, Applicants respectfully submit that claims 21-26 are allowable over the combination of references as argued above, as these claims are dependent from claim 1 and Hollenburg fails to overcome the deficiencies of McDermott.

Further, as to claims 21-26, the Action fails to state a prima facie case of obviousness as to the rejection of claims 21-26 based on McDermott in view of Hollenburg. Applicants’ firstly note that Hollenburg fails to teach and the rejection fails to address the positive limitations of claims 25-27, in as much as that the asserted controller of Hollenburg is not a network interfaceable controller that couples to and communicates with a Network Operations Center (NOC). A LAN is not the equivalent of a NOC in that a NOC, as described in Applicants specification at para. 143, monitors and responds to the output from the network interfaceable controller and the asserted LAN is merely a network without the inherent ability to proactively interface with the controller. The assertion that the NOC described and positively claimed is nothing more than an “obvious modification of the LAN disclosed in Hollenburg” dismisses the limitation, which specifically indicates that the NOC is in communication via a network, such as a LAN or cellular network. The system of Hollenburg does not teach a NOC, either expressly or inherently.

Additionally, the wireless communications system shown is for use with a security system. It does not disclose a controller coupling to and communicating with a switching device to detect the position of the switching device and selectively engage the switching device based on input from any one of the several types of sensors to selectively couple through a first or

second of an at least two operating positions in a multiple battery system as positively recited in claim 26.

In addition to not teaching these positively recited claims limitations, one of ordinary skill in the art would not look to the security system of Hollenburg to modify a multiple battery system as taught in McDermott, as these are non-analogous fields of art. The microcontroller of McDermott and of all multiple battery systems manage the multiple battery systems to provide power to a vehicle. The security system of Hollenburg is directed to specifically shut down the power of an ignition in a vehicle. Simply put, McDermott and the instant invention try to give power to a vehicle while Hollenburg is directed to denying power to a vehicle. The claims specifically recite that the controller selectively engages the switching device for coupling the common positive terminal of a battery in one of at least two operating positions. The wireless controller of Hollenburg does not teach switching as between two circuits, much less switching between two operational positions for a switch that controls the selective engagement of a multiple battery system.

Thus, for these separate and additional reasons, the Action fails to establish a prima facie case of obviousness, and claims 21-26 are nonobvious and allowable over the combination of McDermott in view of Hollenburg. Therefore, because claims 21-26 are nonobvious and allowable over the combination of references, Applicants respectfully request that the rejection of claims 21-26 be rescinded, and that this claim be allowed.

As the originally filed case had sixty-two claims pending and four independent claims, no fee is believed due with this response for the additional claims.


Applicants also note the previous filing of a supplemental information disclosure statement and a Form PTO-1449 on October 14, 2004 containing fifty-two (52) patent references

and six (6) non-patent publications together with a \$180.00 filing fee. However, the Action does not indicate that the Information Disclosure Statement has been considered. In response to this Amendment, it is respectfully requested that the Information Disclosure Statement be considered, that the Form PTO-1449 be initialed to indicate that the submitted prior art has been considered, and that a copy of the initialed Form PTO-1449 be included with the response to this Amendment.

THEREFORE, because all objections and rejections have been overcome, it is submitted that claims 1-29 and 63-65 are allowable, and such allowance is requested. If a telephone interview would further such allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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EJW
RP-002 Amendment Second non-final

In the Drawings

The attached replacement drawings include changes to Figs. 3B, 4B, 5B, 8A-8C and 10A.

Applicants have hereby amended figures 3B, 4B, 5B, and 8A-8C to include labeling for the components shown.

Figure 8B has been amended to show a controller 700 having a signal processor, lookup tables, memory devices, and a security protocol/encryption element. Additionally, the indicator element 775 includes an LCD panel and the switch sensor has been properly identified as element 750.

Figure 10A has also been amended to include an indicator element 775 with a plurality of indicator lights; in this case these can represent the claimed light emitting diodes. Further, lines indicating an audible indicator issuing from indicator element 775 have been included and can represent the presence of a klaxon, voice, or similar audible alert. Elements 710 and 740 are shown and described (Applicants' specification, paragraph 139) as "sensors [that] can for instance be, but are not limited to, VI sensors".

This set of drawings replaces all prior versions, and listings, of drawings in the application.